

# **EXHIBIT 7**

**UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MASSACHUSETTS**

**ANYWHERECOMMERCE, INC. and  
BBPOS LIMITED,**

**Plaintiffs,**

**v.**

**INGENICO, INC., INGENICO CORP.,  
INGENICO GROUP, SA, and INGENICO  
VENURES SAS,**

**Defendants.**

**Civil Docket No: 1:19-cv-11457-IT**

**EXPERT REPORT OF IVAN ZATKOVICH**

**FEBRUARY 16, 2022**

**CONFIDENTIAL**

[BBPOS\_1396262-BBPOS\_1396263] These discussions include regarding power management, and high data rates for the audio jack interface requiring algorithms for Automatic Gain Control.

131. By May'12, ROAM data and PayPal sign the agreement to produce the first PayPal mPOS based on the ROAM Data (aka BBPOS platform). BBPOS starts with the G4X platform already in production and creates a new version for testing with PayPal. Development and testing with PayPal continues and a new form factor is selected for PayPal. This new product evolution becomes the G5X using the PayPal triangle form factor.

132. At this time, Rotsaert decides he will take over aspects of the development of the G5X and convinces the ROAM CEO to direct BBPOS to include him on all BBPOS activities and communication. BBPOS follows through with providing information and engineers to assist as they have been told that Rotsaert is taking over Product Management including the Physical side of the product and to include him on all activity and communication. Coupled with the assumption that an Acquisition of BBPOS was in process, the BBPOS team complies with all requests to provide information on their product designs and status.

133. In May'12, Jimmy Tang, BBPOS, shares information on the new ROAM pay API, RoamPay API 4.0 v1.2 - Client Side Technical Specs.docx, with the ROAM and Inegnico teams and explains to recipients how he is collecting data, e.g. in what type of parameter <String, String> and then gives an example code snippet in Java "hashMap.put(ApiParams.Amount, "1.00"); // amount field" [BBPOS\_0004723-BBPOS\_0004724]

134. As May'12 comes to a close, Rotsaert sets up a workshop at Valence (FR) and requests BBPOS send their firmware engineer(s) to attend. In addition, Rotsaert requests "all materials you have about swipe + EMV Chip product. Schematic, Your selected core IC specification, Software synoptic... Battery capacity... intermediate milestones ..."

[BBPOS\_0000003-BBPOS\_0000005] The BBPOS teams continues to answer questions regarding antenna size, battery requirements, contactless capabilities, chipsets and other power management topics. [BBPOS\_0005186-BBPOS\_0005188, IngenicoInc\_0010296-IngenicoInc\_0010306 and IngenicoInc\_0009879-IngenicoInc\_0009882].

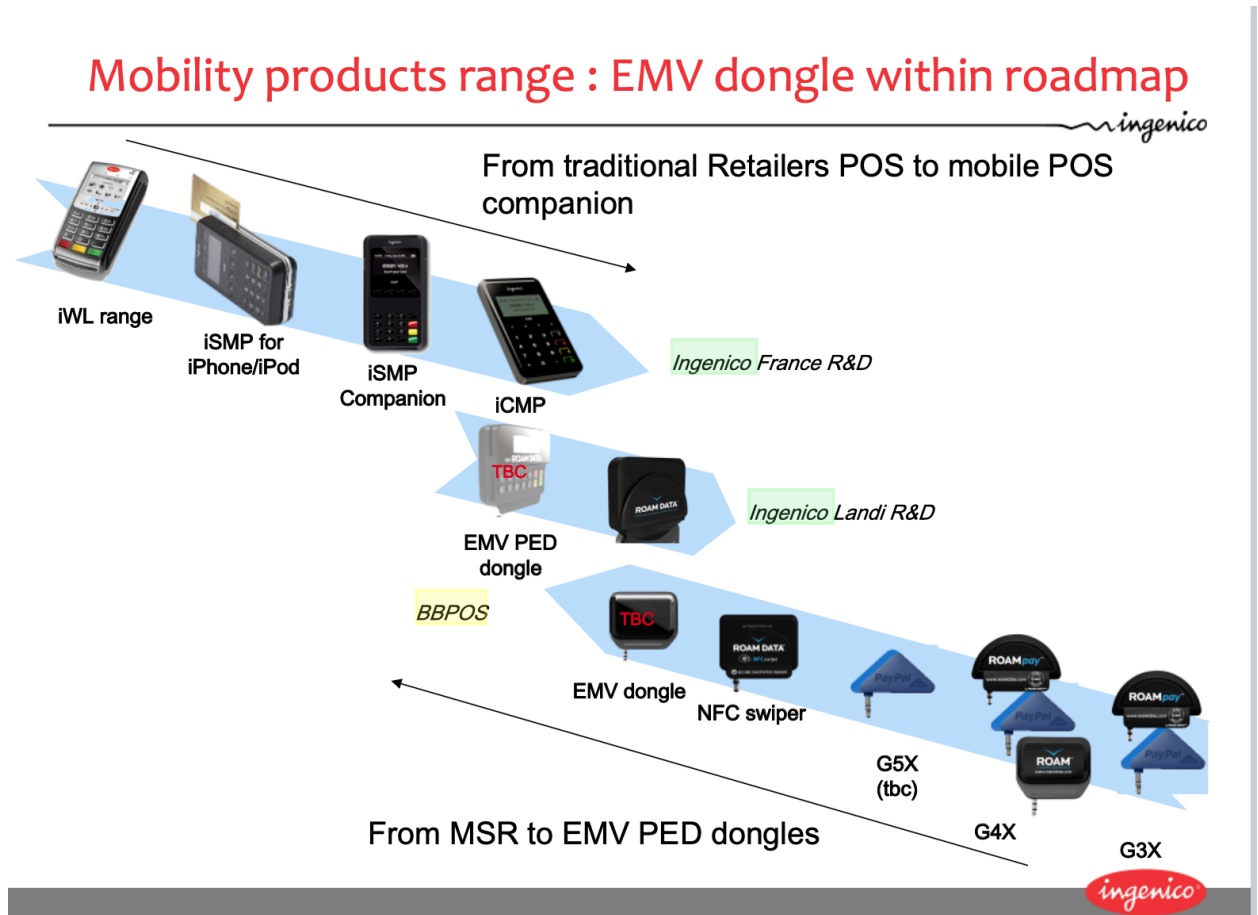
135. As part of the discussion on current status and preparing a joint workshop Rotsaert indicates to BBPOS that his plan is to “release this device before end of the year with a Press Release during Cartes Paris (6-8 November 2012).” [BBPOS\_0000003-BBPOS\_0000005] Rotsaert then directs BBPOS to participate in developing 2 scenarios – One on Ingenico platform and one on BBPOS platform. He provides direction on what he needs from BBPOS to do so. [IngenicoInc\_0010311-IngenicoInc\_0010312]

136. In July’12, Rotsaert requests more copies of documentation, schematics and designs from the BBPOS team. And the BBPOS team responds throughout July’12 with all the previously provided designs, specs, schematics and answers to questions regarding same. [BBPOS\_0005112, BBPOS\_0005646, IngenicoInc\_0010655-IngenicoInc\_0010656, and BBPOS\_0005664 and BBPOS\_0005630] One such request from Rotsaert comes as part of an effort to propose a solution for an EasyCash (ING Germany) demo, to which BBPOS replies with their latest version of their Swiper Data Output Format. [BBPOS\_0005121-BBPOS\_0005122]

137. In Oct’2012, Rotsaert presents a SOW to Landi for development of the iTMP product line which includes power management, security and an audio jack interface with polarity detection and switching. [IngenicoInc\_0138722-IngenicoInc\_0138748]

138. Late in Oct’12, Rotsaert presents the Roadmap going forward with Landi including the expected release dates of the various products. This presentation clearly shows a progression

into the future with Landi and BBPOS in the graphic below and refers to “Global strategy: Derivated iTMP/(iTMP+) from from Landi S055P”.



*RM1&TR1 ITMP with Landi \_ 20121029.pptx [IngenicoInc\_0072949]*

139. The sections below describe the specific documents and emails that shared the BBPOS trade secrets with ROAM/Ingenico.

### 6.2.1 Audio Jack Polarity Detection trade secret information requested/received

140. BBPOS shared their design information for detecting the polarity of an audio jack by providing circuit schematics. These circuit schematics identify specific methods for first detecting the polarity of the audio jack and then routing the higher voltage signal to the “Mic input” and routing the lower voltage signal to the “Ground”.

- Product Requirements Document – RP100X Draft (2013)

3.8.3.	RP100x shall detect polarity to switch automatically MIC/GND	
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***Product Requirement: “detect polarity to switch automatically MIC/GND”***

***PRD RP100x DRAFT.DOC, 5/24/2013, P10 [IngenicoInc\_0190250-IngenicoInc\_0190265]***

- Product Requirements Document - RP150X Version 2.0 (2013)

4.14.5.	RP150x shall detect polarity to switch automatically MIC/GND	M
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***Product Requirement: “detect polarity to switch automatically MIC/GND”***

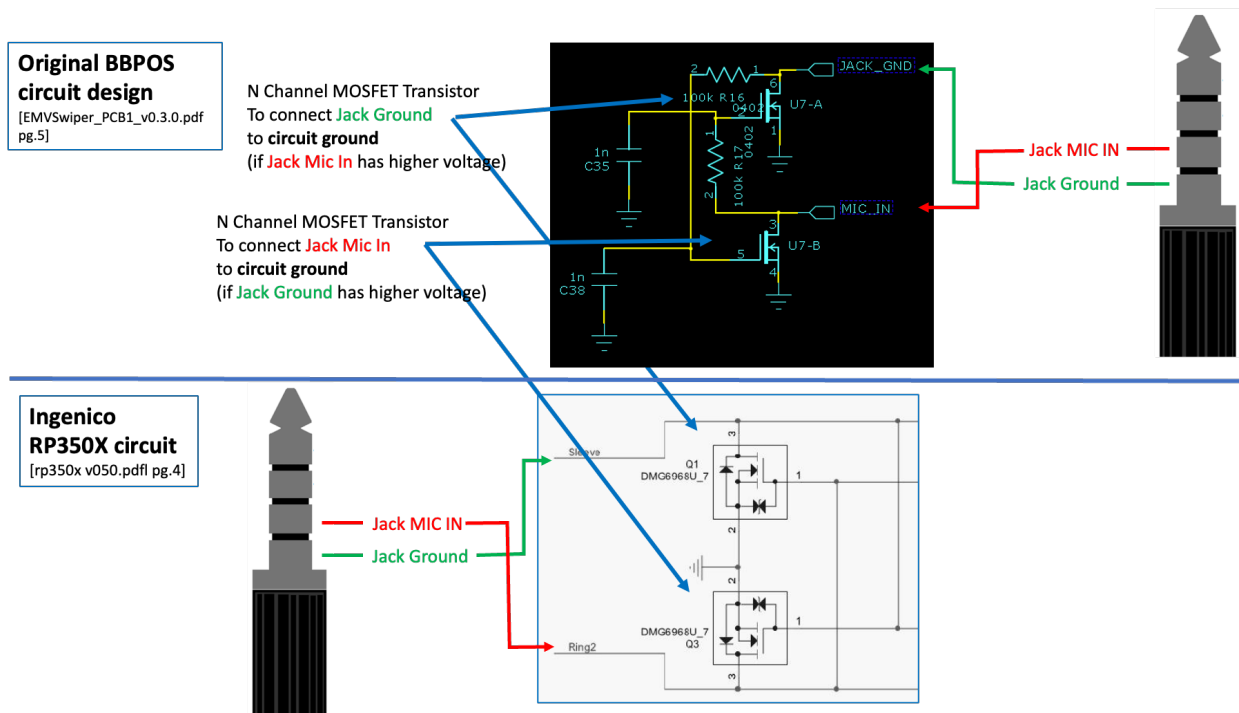
***PRD RP150X\_ v2.0 - 07 01 2013.DOC, 1/7/2013, P17 [IngenicoInc\_0076359-IngenicoInc\_0076380]***

150. The following subsections show additional detail as to how the BBPOS Polarity Detection design was incorporated into these Ingenico devices.

#### ***6.3.1.1 Ingenico RP350X uses BBPOS’ design for Polarity detection and reversal***

151. The RP350X is the first mPOS device that Ingenico/Landi released for sale. The RP350X served as a platform or basis for subsequent Ingenico mPOS devices including the RP750X, RP100 series, and the RP450 series.

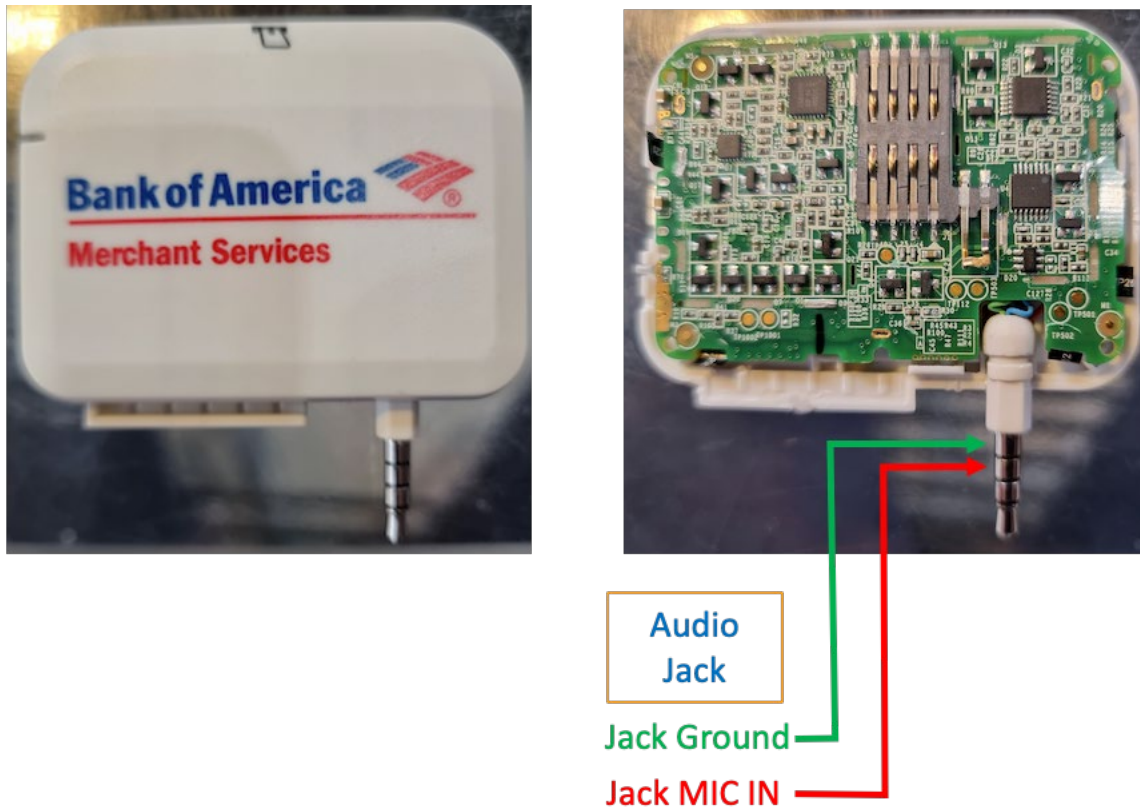
152. In the RP350X device, Ingenico used the BBPOS circuit design that incorporated a single pair of N channel MOSFET transistors to determine if the **Jack MIC IN** or the **Jack Ground** has the higher voltage, and to connect the correct signal to the **circuit ground** of the mPOS device. This is shown below in the comparison of BBPOS’ original circuit schematic and Ingenico’s RP350X circuit schematic.



***Ingenico's RP350X using same circuit design  
as BBPOS' Polarity detection and reversal design***

153. The use of this BBPOS design in an Ingenico device is sufficient to both detect and reverse the polarity of the Jack signals, by connecting the correct Jack signal to the mPOS circuit ground. This automatically ensures the correct polarity for both the **Jack Ground** and the **Jack MIC IN** signals for the mPOS device.

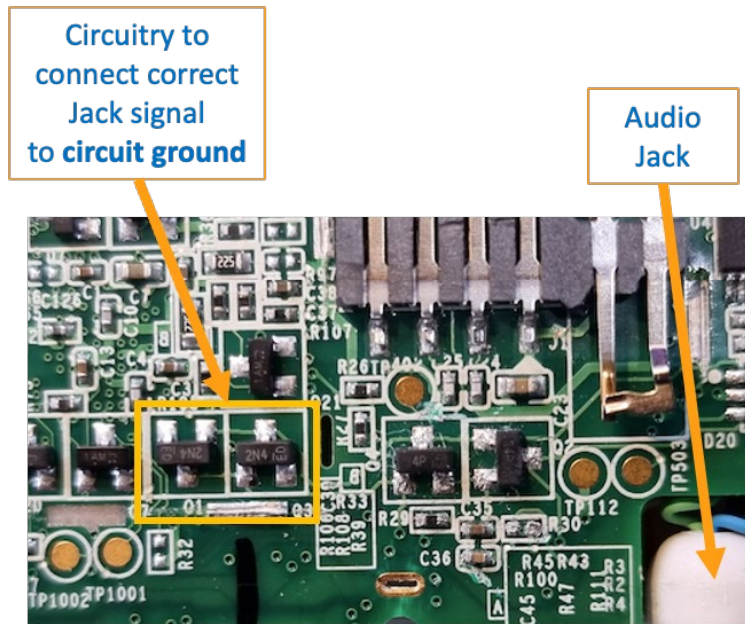
154. The following shows the physical Ingenico RP350X mPOS device and the internal circuitry.



***Ingenico RP350X mPOS device and internal circuitry***

155. The following shows the specific circuitry that performs the Polarity detection and reversal for the circuit ground. This uses the same design and concepts that BBPOS provided to ROAM that were shared with Ingenico.

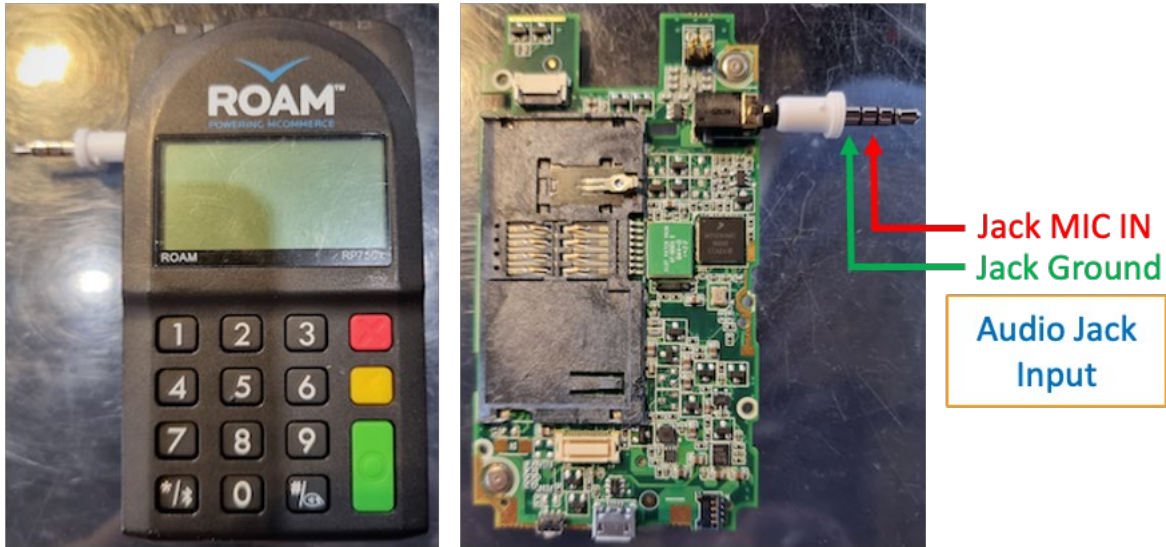




*Ingenico RP350X circuitry that performs BBPOS' polarity detection and reversal*

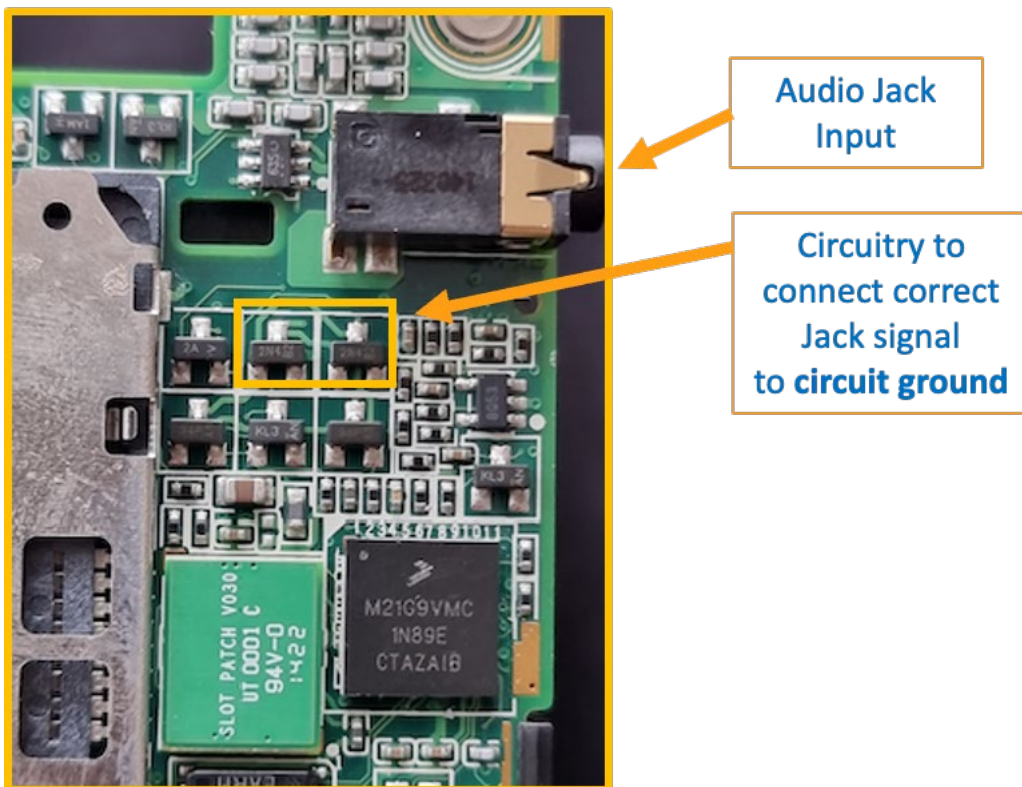
#### **6.3.1.2 Ingenico RP750X uses BBPOS' design for Polarity detection and reversal**

156. The following shows the physical Ingenico RP750X mPOS device and the internal circuitry. The device I tested below is ROAM's prototype for the Ingenico RP750X device.



***Ingenico RP750X mPOS device and internal circuitry***

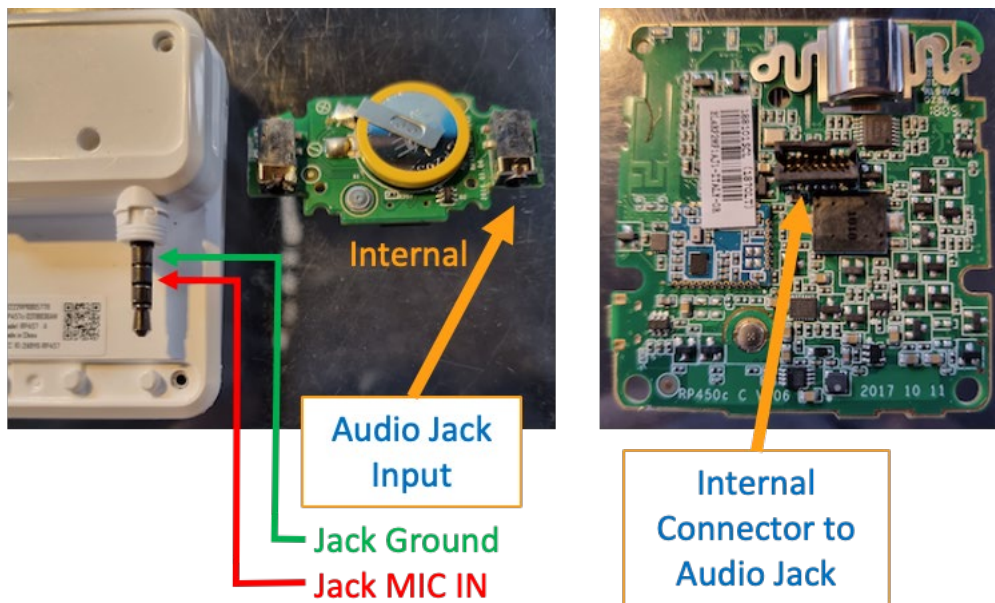
157. The following shows the specific circuitry that performs the Polarity detection and reversal for both the circuit ground and the circuit microphone. This uses the same design and concepts that BBPOS provided to ROAM that were shared with Ingenico.



***Ingenico RP750X circuitry that performs BBPOS' polarity detection and reversal***

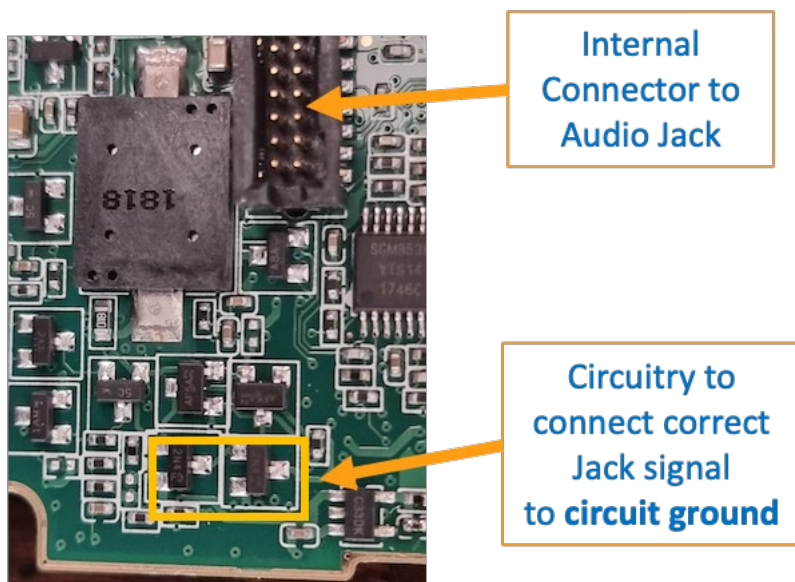
***6.3.1.3 Ingenico RP457C uses BBPOS' design for Polarity detection and reversal***

158. The following shows the physical Ingenico RP457C mPOS device and the internal circuitry.



***Ingenico RP457C mPOS device and internal circuitry***

159. The following shows the specific circuitry that performs the Polarity detection and reversal for both the circuit ground and the circuit microphone. This uses the same design and concepts that BBPOS provided to ROAM that were shared with Ingenico.

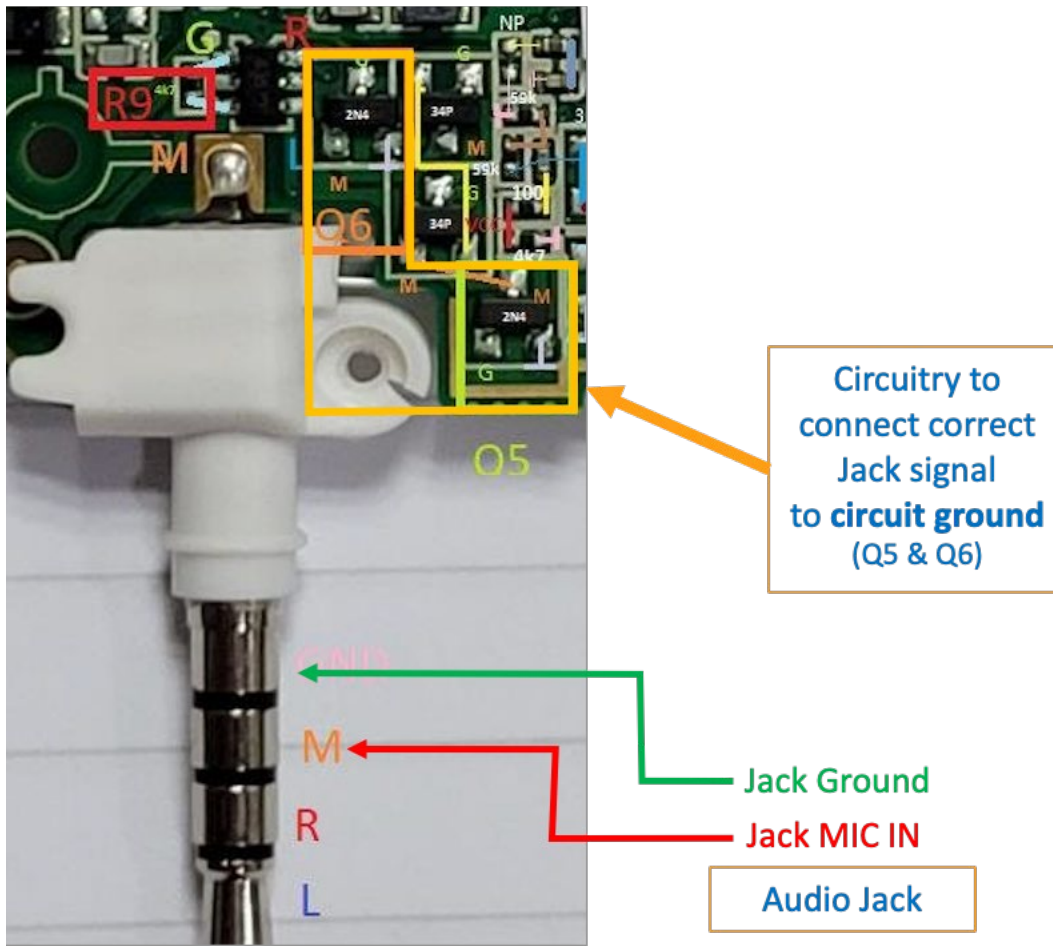


***Ingenico RP457C circuitry that performs BBPOS' polarity detection and reversal***



### 6.3.1.4 Ingenico RP170C uses BBPOS' design for Polarity detection and reversal

160. The following shows the specific circuitry that performs the Polarity detection and reversal for both the circuit ground and the circuit microphone. This uses the same design and concepts that BBPOS provided to ROAM that were shared with Ingenico.



*Ingenico RP170C circuitry that performs BBPOS' polarity detection and reversal*

### 6.3.2 Ingenico's use of BBPOS's Power Management design (Auto Power On)

161. As mentioned in Section 5.1.2, BBPOS' Power Management Design allows the mPOS to automatically power on when the mobile phone is plugged in and the audio jack

interface is active. Also described above in Section 6.2.2, BBPOS provided their designs for power management to Ingenico, specifically including automatic power on designs.

162. The product requirements for the Ingenico devices in 2013 cited below identify the use of BBPOS' design to "automatically power on when plugged on Mobile".


- Product Requirements Document – RP350X version 5.0 (2012)

4.21.7.	RP350x shall automatically power on when plugged on Mobile	M
4.21.8.	RP350x shall automatically power off when unplugged on Mobile	M

***Product Requirement: "automatically power on when plugged on Mobile"***

***PRD RP350X\_ v5.0 - 03 12 2012.DOC, 12/3/2012, P22  
[IngenicoInc\_0049942-IngenicoInc\_0049966]***

- Product Requirements Document – RP750X version 7.0 (2013)

4.5.10.	Idle screen When device is power on (or wake-up) out of transaction operation, RP750x should display an idle screen based on a logo which may be customized (only for specific product with customer industrial design) 	M
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***Product Requirement: "device is power on (or wake-up) out of transaction operation"***

***PRD RP750X\_ v7.0 - 04 03 2013.DOC, 3/4/2013, P25  
[IngenicoInc\_0181636-IngenicoInc\_0181675]***

- Product Requirements Document - RP150X Version 2.0 (2013)

4.21.6.	RP150x shall automatically power on when plugged on Mobile	M
4.21.7.	RP150x shall automatically power off when unplugged on Mobile	M

***Product Requirement: "automatically power on when plugged on Mobile"***

***PRD RP150X\_ v2.0 - 07 01 2013.DOC, 1/7/2013, P20  
[IngenicoInc\_0076359-IngenicoInc\_0076380]***

- Product Requirements Document - RP100X DRAFT (2013)

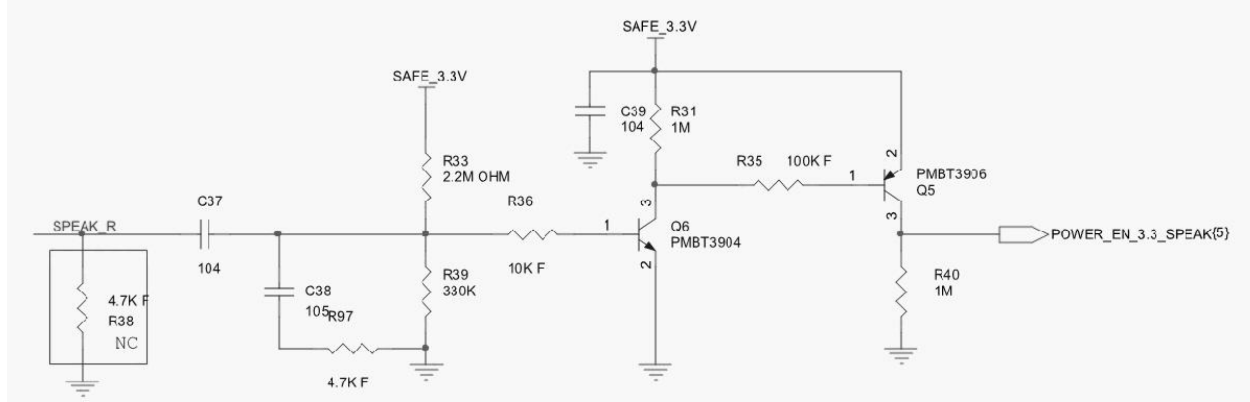
3.21.5.	RP100x shall automatically power off when unplugged on Mobile	M
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*PRD RP100x DRAFT.DOC, 5/24/2013, P14 [IngenicoInc\_0190250-  
IngenicoInc\_0190265]*

163. The specific behavior of the Ingenico devices is that, once the device is asleep, it will wake-up when the mobile phone is plugged in and there is valid activity from the mobile phone on the audio jack interface. Once the device is awake it will determine if the signal from the audio jack interface is valid (e.g. the mobile phone payment app requests an initialization or transaction from the mPOS device). If it is not a valid mPOS signal the power does not remain on.

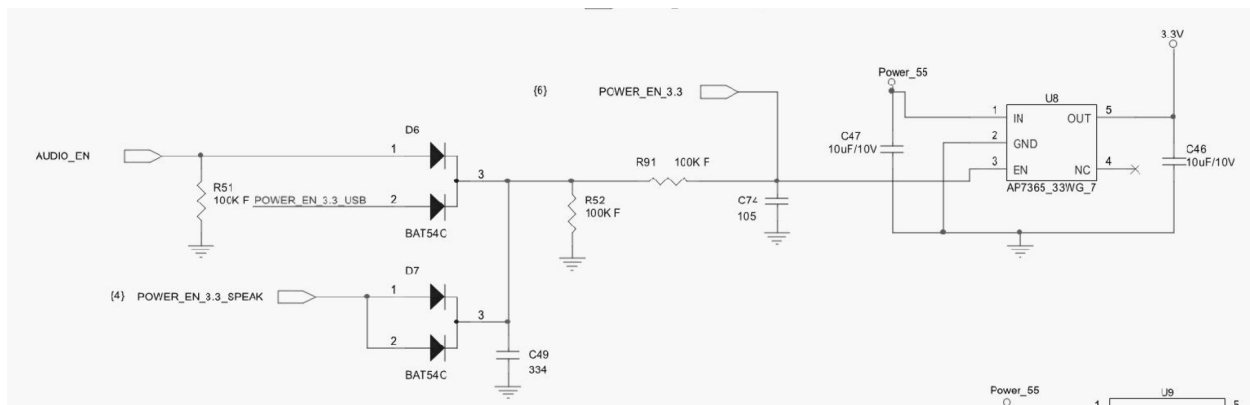
164. I tested this behavior of the RP350X, RP750X, and the RP457C devices by monitoring the activity on the audio jack interface with an oscilloscope. For example, simply plugging in the audio jack cable from the mobile phone to the mPOS device was not sufficient to power on the device. When I played music on the mobile phone through the audio jack interface, this was not sufficient to have the Ingenico device remain on. However, I then started a test transaction from the mobile phone application. The test transaction begins with a device initialization over the audio jack interface in order to determine the type of mPOS device. When that mPOS initialization occurs, the Ingenico device turns-on and remains on, exhibiting the same behavior as the BBPOS design.

165. In addition, the schematics for the Ingenico RP350X contain the same type of trigger circuit and power switch as that of the BBPOS design. The following shows the equivalent of BBPOS' "temporary trigger" that uses the input from the SPEAK\_R signal (right audio channel), on the left side of the diagram, to produce a trigger signal POWER\_EN\_3.3\_SPEAK on the right side.



*rp350x v050.pdf pg.4 [IngenicoInc\_0283923-IngenicoInc\_0283931]*

166. That POWER\_EN\_3.3\_SPEAK trigger signal, now shown below at the lower left side, is then input to the ‘enable’ pin on the “power switch” on the right side (IC component AP7365\_33WG\_7). That “power switch” will then supply power to the microprocessor on the mPOS device via the 3.3v (i.e. 3.3 volts applied to the VDD of the microprocessor).



*rp350x v050.pdf pg.5 [IngenicoInc\_0283923-IngenicoInc\_0283931]*

167. The power switch in the schematic above can also receive trigger signals from other sources such as the AUDIO\_EN signal in the top right side of the above diagram that is enabled by the microprocessor, which I believe acts in a similar fashion to a “permanent trigger” of the BBPOS design.



### 6.3.3 Ingenico's use of BBPOS' Pre-analyzed communication settings and adaptive threshold (or Auto Gain Control)

168. As discussed in Section 5.1.3, one of BBPOS' trade secrets is the information that they produced as a result of analyzing and determining the audio and communication characteristics of over 442 mobile phone models. Section 6.2.3 above, also describes the information BBPOS shared with Ingenico regarding their designs for communication settings and Automatic Gain Control (AGC).

169. This information allowed the configuration of the communication settings of the mobile phone to achieve the best communication results. The parameters of the communication settings for the BBPOS SDK included:

- the frequency or speed of the incoming (receive) transmissions [*MaxInputFrequency*]
- the frequency or speed of the outgoing (send) transmissions [*MaxOutputFrequency*]
- the volume setting of the audio jack interface [*LowVolume*]
- the size of data objects being transmitted [*e.g. PreambleLength*]
- the audio source type [*MicrophoneAudioSource*]

170. I was able to compare the parameters for the communication settings defined by BBPOS with the parameters of the communication settings used by Ingenico for the Landi mPOS devices. To do this I retrieved a copy of the SDK used for the PayPal branded mPOS devices (which included both the Ingenico/Landi and BBPOS devices). This is available on the public web site at:

<https://mvnrepository.com/artifact/com.PayPal.retail/here-sdk-debug/2.1.02.19063010>

171. I was also able to “decompile” this SDK and determined that it contains, among other software components, the “ROAM unified API”. As part of the ROAM unified API were two other subcomponents labeled as the BBPOS SDK and the Landicorp SDK.

172. From the decompiled source code of the PayPal SDK, I was able to determine that the Landicorp SDK utilized many of the same parameters for the mobile phone communication settings that BBPOS had established. I identified communication settings for 272 mobile phone models within the Landicorp SDK. The parameters of these communication settings for the Ingenico/Landi SDK included:

- the frequency or speed of the incoming (receive) transmissions [*RecvBaud*]
- the frequency or speed of the outgoing (send) transmissions [*SendBaud*]
- the volume setting of the audio jack interface [*SendVolume*]
- the size of data objects being transmitted [*FrameLength*]
- the audio source type [*AudioSource*]

173. The similar parameter settings used by both companies indicate that BBPOS devices and Ingenico devices optimized their audio interfaces to communicate data at high speeds (over 3000bps / baud). This would have required the use of adaptive threshold methods (i.e. Auto Gain Control) that BBPOS had developed and shared with Ingenico. Therefore, it is my opinion Ingenico utilized BBPOS' Auto Gain Control trade secret information in their product designs.

#### **6.3.4 Ingenico's use of BBPOS' Communication Formats**

174. As mentioned in Section 5.1.4, BBPOS' proprietary mPOS communication formats were developed after working extensively with financial and payment processing companies that developing mobile payment applications. Section 6.2.4 describes the information BBPOS shared with Ingenico regarding their Communication Formats.

175. The following indicates that Ingenico utilized this information in their product design. For example, the following reference in Ingenico's requirements document for a Key Management System identifies the use of at least two of those communication formats (format 11 and 29):

High level description :

- 3<sup>rd</sup> Party partner for BDK (batch of several BDK) generation & storage
- No more BDK created by BBPOS for new P/N, replacement of BDK for Roam production standard. New P/N with Data DUKPT format (format 11 & equivalent of 29 for Data DUKPT)
- Key custodians for transmission to Roam Datacenter & Landi/BBPOS factory
- Key injection in Flextronics with TR39 compliant Landi solution (key loader, secure room) with Landi
- Decryption made in HSM without redundancy
- Decryption / HSM packaged to be delivered as an appliance for installation into a 3<sup>rd</sup> party datacenter (with MCM5 license)

*PRD Key Management System \_ v1.0.2.DOC, pg. 10 [IngenicoInc\_0079958-IngenicoInc\_0079977]*

### **6.3.5 Ingenico's use of BBPOS Data Security / Encryption Methods (DUKPT data method)**

176. As mentioned in Section 5.1.5, BBPOS' proprietary data encryption utilizes a method that derives a DUKPT data key using the standard data variant without performing the TDES self-encryption of the result of the applied Data variants. Section 6.2.5 describes the information BBPOS shared with Ingenico regarding their DUKPT data encryption methods.

177. Ingenico utilized this information in their product designs. For example, Ingenico identifies in their requirements document for a Key Management System that they will utilize the BBPOS' "Data DUKPT" method that is specified in BBPOS' communication format 11 and format 29.

High level description :

- 3<sup>rd</sup> Party partner for BDK (batch of several BDK) generation & storage
- No more BDK created by BBPOS for new P/N, replacement of BDK for Roam production standard. New P/N with Data DUKPT format (format 11 & equivalent of 29 for Data DUKPT)
- Key custodians for transmission to Roam Datacenter & Landi/BBPOS factory
- Key injection in Flextronics with TR39 compliant Landi solution (key loader, secure room) with Landi
- Decryption made in HSM without redundancy
- Decryption / HSM packaged to be delivered as an appliance for installation into a 3<sup>rd</sup> party datacenter (with MCM5 license)

*PRD Key Management System \_ v1.0.2.DOC, pg. 10 [IngenicoInc\_0079958-IngenicoInc\_0079977]*

178. Later in the same document, Ingenico also mentions the use of the BDK (Base Derivative Key) formation after the migration of the Landi products to the “Data DUKPT” method.

<b>4.3.6.</b>	Same BDK format for Landi product & BBPOS (after migration to Data DUKPT)	W
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*PRD Key Management System \_ v1.0.2.DOC, pg. 16 [IngenicoInc\_0079958-IngenicoInc\_0079977]*

179. Again, in the same document, Ingenico identifies that the use of BBPOS Encryption should be “supported in both their Test & Production” products as a Service.

<b>4.6.6.</b>	BBPOS Encryption should be supported in both Test & Production as a Service	M
<b>4.6.7.</b>	BBPOS Encryption should be available as a License model	M

*PRD Key Management System \_ v1.0.2.DOC, pg. 19 [IngenicoInc\_0079958-IngenicoInc\_0079977]*

## 7 SUMMARY OF OPINIONS

180. My opinions in this report are based on my knowledge, education, experience, and review of the various documents and other information referenced in my report and the attached exhibits. My opinions regarding this case and related issues, as well as my bases and support for those opinions, are set forth in detail throughout this report and are not limited to the opinions summarized below. I expect to testify regarding Defendant’s products and BBPOS’ products, including whether Defendant’s products were misused and/or misappropriated in their own products. I also expect to testify regarding technical background information relevant to the issues in this case as set forth herein.

- PRD RP100x DRAFT.DOC, 5/24/2013, P14 [IngenicoInc\_0190250-IngenicoInc\_0190265]
- PRD RP150X\_v2.0 - 07 01 2013.DOC, 1/7/2013, P20 [IngenicoInc\_0076359-IngenicoInc\_0076380]

186. BBPOS Automatic Gain Control designs:

ROAM and Ingenico requested and readily received trade secret information from BBPOS regarding Power Management. ROAM and Ingenico also discussed and questioned BBPOS for further details on the concepts and operation of battery usage and power management. The Ingenico devices that were produced subsequent to receiving that trade secret information contained the same concepts and design as the BBPOS power management design.

- This capability was introduced by Ingenico/Landi when producing the RP350X models and future iTMP models which came after their engagement with BBPOS/ROAM Data development. The similar parameter settings used by both companies indicate that BBPOS devices and Ingenico devices optimized their audio interfaces to communicate data at high speeds (over 3000bps / baud). This would have required the use of adaptive threshold methods (i.e. Auto Gain Control) that BBPOS had developed and shared with Ingenico. The PayPal SDK Here application, for example, shows the use of these same parameters and is available at: <https://mvnrepository.com/artifact/com.PayPal.retail/here-sdk-debug/2.1.02.19063010>

187. BBPOS Communication Interface designs:

ROAM and Ingenico requested and readily received trade secret information from BBPOS regarding the Communication Interface formats that BBPOS painstakingly worked through by

## 7.2.1 TABLE SUMMARIZING EXPERT OPINION REGARDING THEFT OF BBPOS'S TRADE SECRETS

<u>No.</u>	<u>BBPOS Trade Secret</u>	<u>Brief Description</u>	<u>Unauthorized Recipient</u>	<u>Improper Means</u>	<u>Disclosure / Usage / Expression</u>
1	<b>Audio Jack Polarity Detection</b>	<i>This trade secret determines if the base of a mobile phone's audio jack has a positive or negative polarity and how to route the microphone / input signal appropriately. This enables a single solution to support multiple mobile phone signal formats.</i>	1. <u>Ingenico</u>	Primarily, from 2/2012 through 8/2012, at the request and direction of ROAM under the BBPOS-ROAM Licensing Agreement, BBPOS transmitted proprietary information in the form of schematics, design documents, source code, etc., among other protected, confidential information of BBPOS, on many occasions to ROAM / Ingenico. <sup>6</sup>	Various improper disclosures by ROAM / Ingenico, including, without limitation, to Landi.
			2. <u>Landi</u>	Contemporaneously, Ingenico (via Mr. Rotsaert and/or at his or other Ingenico's executives' directive(s)) directly discloses such trade secrets and other protected, confidential information to Landi.	<b>Accused Devices:</b> RP350X, RP750X, RP100 series and RP450 series
2	<b>Power Management</b>	<i>This trade secret provides methods for efficient power use for battery powered mPOS devices as well as performing sleep and auto wakeup (Power on) functions in order to conserve power.</i>	1. <u>Ingenico</u>	Primarily, from 2/2012 through 8/2012, at the request and direction of ROAM under the BBPOS-ROAM Licensing Agreement, BBPOS transmitted proprietary information in the form of schematics, design documents, source code, etc., among other protected, confidential information of BBPOS, on	Various improper disclosures by ROAM / Ingenico, including, without limitation, to Landi.

<sup>6</sup> [See, e.g., BBPOS\_0005630; BBPOS\_0005631; BBPOS\_0005632; BBPOS\_0005633-BBPOS\_0005645; BBPOS\_0005632; BBPOS\_0005630; BBPOS\_0005664; BBPOS\_0005665-BBPOS\_0005667; BBPOS\_0005665-BBPOS\_0005667; BBPOS\_0005664, etc.]

				many occasions to ROAM / Ingenico. <sup>7</sup>	
			2. <u>Landi</u>	Contemporaneously, Ingenico (via Mr. Rotsaert and/or at his or other Ingenico's executives' directive(s)) directly discloses such trade secrets and other protected, confidential information to Landi.	<b>Accused Devices:</b> RP350X, RP750X, RP100 series and RP450 series
3	<b>Signal Control Settings and Automatic Gain Control</b>	<i>This trade secret determines the appropriate gain (e.g., signal thresholds) to use in decoding data, and determining at what speed to reliably transmit and receive the information based parameters defined for the specific mobile phone being used.</i>	1. <u>Ingenico</u>	From 2/2012 through 8/2012, at the request and direction of ROAM under the BBPOS-ROAM Licensing Agreement, BBPOS discloses such trade secrets and other protected, confidential information of BBPOS to ROAM / Ingenico. <sup>8</sup>	Various improper disclosures by ROAM / Ingenico, including, without limitation, to Landi.
			2. <u>Landi</u>	Contemporaneously, Ingenico (via Mr. Rotsaert and/or at his or other Ingenico's executives' directive(s)) directly discloses such trade secrets and other protected, confidential information to Landi.	<b>Accused Devices:</b> RP350X, RP750X, RP100 series and RP450 series
4	<b>Communication Formats</b>	<i>This trade secret provides over 25 different formats for sending credit card and transaction related information between the mPOS device and the mobile phone to ensure compatibility with different mobile payment vendor applications.</i>	1. <u>Ingenico</u>	Primarily, from 2/2012 through 8/2012, at the request and direction of ROAM under the BBPOS-ROAM Licensing Agreement, BBPOS BBPOS transmitted proprietary information in the form of schematics, design documents, source code, etc., among other protected, confidential information of BBPOS, on	Various improper disclosures by ROAM / Ingenico, including, without limitation, to Landi.

<sup>7</sup> [See, e.g., IngenicoInc\_0009883-IngenicoInc\_0009891; IngenicoInc\_0010195-IngenicoInc\_0010200; IngenicoInc\_0010195-IngenicoInc\_0010200; IngenicoInc\_0009883-IngenicoInc\_0009891; IngenicoInc\_0135063-IngenicoInc\_0135068; IngenicoInc\_0135063-IngenicoInc\_0135068; IngenicoInc\_0134751-IngenicoInc\_0134759; BBPOS\_0005664; BBPOS\_0005665-BBPOS\_0005667; BBPOS\_0005665-BBPOS\_0005667; BBPOS\_0005664; BBPOS\_0005646; BBPOS\_0005647-BBPOS\_0005648; BBPOS\_0005649-BBPOS\_0005663; IngenicoInc\_0010655-IngenicoInc\_0010656, etc.]

<sup>8</sup> [See, e.g., IngenicoInc\_0009756-IngenicoInc\_0009757; IngenicoInc\_0283863-IngenicoInc\_0283864, etc.]

				many occasions to ROAM / Ingenico. <sup>9</sup>	
			2. <u>Landi</u>	Contemporaneously, Ingenico (via Mr. Rotsaert and/or at his or other Ingenico's executives' directive(s)) directly discloses such trade secrets and other protected, confidential information to Landi.	<b>Accused Devices:</b> RP350X, RP750X, RP100 series and RP450 series
5	<b>Data Security / Encryption Methods</b>	<i>This trade secret provides methods for encrypting credit card data based on variations of data encryption methods.</i>	1. <u>Ingenico</u>	Primarily, from 2/2012 through 8/2012, at the request and direction of ROAM under the BBPOS-ROAM Licensing Agreement, BBPOS transmitted proprietary information in the form of schematics, design documents, source code, etc., among other protected, confidential information of BBPOS, on many occasions to ROAM / Ingenico. <sup>10</sup>	Various improper disclosures by ROAM / Ingenico, including, without limitation, to Landi.
			2. <u>Landi</u>	Contemporaneously, Ingenico (via Mr. Rotsaert and/or at his or other Ingenico's executives' directive(s)) directly discloses such trade secrets and other protected, confidential information to Landi.	<b>Accused Devices:</b> RP350X, RP750X, RP100 series and RP450 series

<sup>9</sup> [See, e.g., BBPOS\_0004382; BBPOS\_0004383-BBPOS\_0004384; BBPOS\_0004383-BBPOS\_0004384; BBPOS\_0004382; BBPOS\_0004422-BBPOS\_0004423; BBPOS\_0004622-BBPOS\_0004627; BBPOS\_0004628-BBPOS\_0004648; BBPOS\_0005113-BBPOS\_0005114; BBPOS\_0005115-BBPOS\_0005116; BBPOS\_0005113-BBPOS\_0005114; BBPOS\_0005112; BBPOS\_0005115-BBPOS\_0005116; BBPOS\_0005112; BBPOS\_0005121-BBPOS\_0005122; BBPOS\_0005123-BBPOS\_0005137; BBPOS\_0005123-BBPOS\_0005137; BBPOS\_0005121-BBPOS\_0005122; BBPOS\_0004628-BBPOS\_0004648; BBPOS\_0004622-BBPOS\_0004627; BBPOS\_1632236-BBPOS\_1632239; BBPOS\_1632240; BBPOS\_1632240; BBPOS\_1632236-BBPOS\_1632239, etc.]

<sup>10</sup> [See, e.g., BBPOS\_0004382; BBPOS\_0004383-BBPOS\_0004384; BBPOS\_0004399-BBPOS\_0004406; BBPOS\_0004390; BBPOS\_0004413-BBPOS\_0004417; BBPOS\_0004391-BBPOS\_0004397; BBPOS\_0004388; BBPOS\_0004407-BBPOS\_0004410; BBPOS\_0004419; BBPOS\_0004389; BBPOS\_0004398; BBPOS\_0004418; BBPOS\_0004412; BBPOS\_0004411; BBPOS\_0004385-BBPOS\_0004387; BBPOS\_0004422-BBPOS\_0004423; BBPOS\_0004622-BBPOS\_0004627; BBPOS\_0004628-BBPOS\_0004648, etc.]



Expert Report of Ivan Zatkovich – Trade Secret Misappropriation  
Exhibit B – List of Materials

## List of Materials

Material Title	Document Reference/Source	Bates Number
Deposition of Christopher Rotsaert - ChristopherJRotsaert_COND 4865-2143-9745 v.1.pdf	Deposition Transcript, Oct 13, 2021	
Deposition of Ben Lo - 7675330 Lo.Ben 120821.miniprint.pdf	Deposition Transcript, Dec 8, 2021	
Deposition of Ben Lo Corporate	Deposition Transcript, Dec 10, 2021	
BBPOS ROAM Engineering and License Agreement		AC_02770544-554, IngenicoInc_0268234-238
HomeATM-BBPOS License Agreement		AC_0000917-922
paypal-here-sdk-android-distribution.git	Web download link - <a href="https://mvnrepository.com/artifact/com.paypal.retail/here-sdk-debug/2.1.02.19063010">https://mvnrepository.com/artifact/com.paypal.retail/here-sdk-debug/2.1.02.19063010</a>	
American National Standard for Financial Services - ANSI X9.24-1:2009 - Retail Financial Services Symmetric Key Management Part 1: Using Symmetric Techniques	ANSI Webstore: <a href="https://webstore.ansi.org">https://webstore.ansi.org</a>	
US8336771 - Tsai - Power Dongle	<a href="https://patents.google.com/patent/US8336771B2/en?q=US8336771">https://patents.google.com/patent/US8336771B2/en?q=US8336771</a>	
US8840017 - Chan - Power Management	<a href="https://patents.google.com/patent/US8840017B2/en?q=US8840017+">https://patents.google.com/patent/US8840017B2/en?q=US8840017+</a>	
US9362689 - Lo - Detect Polarity	<a href="https://patents.google.com/patent/US9362689B2/en?q=US9362689++">https://patents.google.com/patent/US9362689B2/en?q=US9362689++</a>	
Re iWL - android with Roam Data solution.msg	DISCO Repository	BBPOS_0004382
ROAM Swiper Output Format 10.docx	DISCO Repository	BBPOS_0004383- BBPOS_0004384
Re iWL - android with Roam Data solution.msg	DISCO Repository	BBPOS_0004422- BBPOS_0004423
Re iWL - android with Roam Data solution.msg	DISCO Repository	BBPOS_0004382

## Expert Report of Ivan Zatkovich – Trade Secret Misappropriation

## Exhibit B – List of Materials

Material Title	Document Reference/Source	Bates Number
SwiperAPI-Android-Guide.doc	DISCO Repository	BBPOS_0004628- BBPOS_0004648
Re ok.msg	DISCO Repository	BBPOS_0005112
BBPOS EMVFlow.docx	DISCO Repository	BBPOS_0005113- BBPOS_0005114
BBPOS TwoWayCommunication.docx	DISCO Repository	BBPOS_0005115- BBPOS_0005116
Re Swiper Track 2 + Track 3.msg	DISCO Repository	BBPOS_0005121- BBPOS_0005122
BBPOS-DataOutputFormat- V1.21.doc	DISCO Repository	BBPOS_0005123- BBPOS_0005137
The documents you requested.msg	DISCO Repository	BBPOS_0005630
Phone list.xlsx	DISCO Repository	BBPOS_0005631
audio interface.pdf	DISCO Repository	BBPOS_0005632
BBPOS-DataOutputFormat- V1.15.doc	DISCO Repository	BBPOS_0005633- BBPOS_0005645
Re One missing scheme for explanation solution to handle the 2 categories of phones for amplitude definition.msg	DISCO Repository	BBPOS_0005646
battery life estimation.pages	DISCO Repository	BBPOS_0005647- BBPOS_0005648
BBPOS-DataOutputFormat- V1.21.doc	DISCO Repository	BBPOS_0005649- BBPOS_0005663
Fwd Paypal G4X - schematic.msg	DISCO Repository	BBPOS_0005664
Paypal-PCB1-ST04-V3.1.pdf	DISCO Repository	BBPOS_0005665- BBPOS_0005667
SwiperDecoder.java (TeresaWongs-Mac-mini- Server's conflicted copy 2012- 08-09).svn-base	DISCO Repository	BBPOS_0691264- BBPOS_0691272
Re Format 17 & Format 20 for Track2.msg	DISCO Repository	BBPOS_1632236- BBPOS_1632239
SwiperSimulator.exe	DISCO Repository	BBPOS_1632240
Re Data rate by audio jack2.msg	DISCO Repository	IngenicoInc_0009756 - IngenicoInc_0009757
Re Our confcall next Monday3.msg	DISCO Repository	IngenicoInc_0009883- IngenicoInc_0009891
EMV_SWIPER.pdf	DISCO Repository	IngenicoInc_0010195 - IngenicoInc_0010200

## Expert Report of Ivan Zatkovich – Trade Secret Misappropriation

## Exhibit B – List of Materials

Material Title	Document Reference/Source	Bates Number
Re Meeting RoamAPI Ingenico-BBPOS.msg	DISCO Repository	IngenicoInc_0010655 - IngenicoInc_0010656
PRD RP350X _ v5.0 - 03 12 2012.DOC	DISCO Repository	IngenicoInc_0049942 - IngenicoInc_0049966
PRD RP150X _ v2.0 - 07 01 2013.DOC	DISCO Repository	IngenicoInc_0076359 - IngenicoInc_0076380
Re Our confcall next Monday3.msg	DISCO Repository	IngenicoInc_0134751 - IngenicoInc_0134759
EMV_SWIPER.pdf	DISCO Repository	IngenicoInc_0135063 - IngenicoInc_0135068
PRD RP750X _ v4.0 - 31 01 2013.DOC	DISCO Repository	IngenicoInc_0158490 - IngenicoInc_0158525
PRD RP100x DRAFT.DOC	DISCO Repository	IngenicoInc_0190250 - IngenicoInc_0190265
RE Visite BBPOS.msg	DISCO Repository	IngenicoInc_0283863 - IngenicoInc_0283864
rp350x v050.pdf	DISCO Repository	IngenicoInc_0283923- IngenicoInc_0283931
PRD Key Management System _ v1.0.2.DOC	DISCO Repository	IngenicoInc_0079958- IngenicoInc_0079977
RM1&TR1 ITMP with Landi _ 20121029.pptx	DISCO Repository	IngenicoInc_0072949
PRD RP750X _ v7.0 - 04 03 2013.doc	DISCO Repository	IngenicoInc_0181636- IngenicoInc_0181675
Paypal-PCB1-ST04-V1.0.pdf		BBPOS_1687763- BBPOS_1687765
Swiper-PCB1-ST11-v2.0.pdf		BBPOS_1687766- BBPOS_1687768
EMVSwiper_PCB1_v0.3.0.pdf		BBPOS_1687755- BBPOS_1687762
Adaptive threshold flowchart.pdf		BBPOS_1687849
BBPOS-DataOutputFormat-V1.40.pdf		BBPOS_1687724- BBPOS_1687754